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ABSTRACT

The relationship between parents' attitudes, and elementary school children's attitudes toward self and toward school were examined in two age groups: first graders who were studied through grade 3, and fourth graders who were studied through grade 6. Five tests were administered to the children: Attitude Toward School, Piers-Harris Children's Self-Concept Scale, McDaniel-Piers Young Children's Self-Concept Scale; Raven's Coloured Progressive Matrices, and the Parent's Questionnaire. The latter provided seventeen subscores: achievement aspiration for child; home learning environment; interest in child's education; demand for child's maturity and independence; quantity and quality of television; involvement in school; attitudes of resignation and of futility; conservatism; acceptance of child; permissiveness; restrictiveness; authoritarianism; nonconformity; birth order of child; and child's preschool experience. While significant correlations were found among some of the variables at each grade level, no highly consistent patterns were revealed. It was suggested that further research is needed on the effects of parental conservatism, futility, and resignation, as well as student nonverbal ability. (Author/GDC)

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A Longitudinal Study of the Effects of Parental Attitudes on the Development of Self-Concepts and Attitude Toward School

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A Longitudinal Study of the Effects of Parental Attitudes on the Development of Self-Concepts and Attitude Toward School

The purpose of the present study was to examine patterns of relationships between measures of parental attitudes and measures of self-concept and attitude toward school for elementary school children.

Educators have long recognized the importance of students' self-concepts and attitudes toward school, and a number of studies have been conducted on these variables (Diggory, 1966; Dryer & Haupt, 1966; Glick, 1967, 1969, 1970; Neale, 1967; and Strickland, 1970). The respective roles played by family and school in the formation of self-concept and school attitudes remains unclear. Calhoun and Morse (1977) cite authors who believe that self-concept is formed by age five and remains constant. Loveridge (1976), on the other hand, reports that school achievement is related to self-concept, but interestingly, to those aspects of self-concept related to peer acceptance. Those aspects of self-concept involving perception as a successful student were more strongly related to family and attitudinal variables than to actual achievement.

The picture regarding attitudes toward school is no more clear than that for self-concept. McMillan (1976) cites a number of studies showing positive relationships between pupils'

attitudes toward specific school subjects and achievement in that subject. Yet, his own review of 124 dissertation abstracts led him to conclude that attitudes toward school subjects were mostly a function of teachers' enthusiasms, pupils' self-concepts, backgrounds and parental attitudes.

It has long been recognized that parents have an important influence on the development of their children. Specific studies have examined parents' achievement aspirations for the child (Rosen & D'Andrade, 1959; Wolf, 1964; Marjoribanks, 1972), home learning environment (Milner, 1951; Bing, 1963; Marjoribanks, 1972), parental concern and interest in the child's education (Rosen & D'Andrade, 1959; Wolf, 1964; Marjoribanks, 1972), parental demand for maturity or independence (Rosen & D'Andrade, 1959; Becker, 1964; Baumrind, 1972; Marjoribanks, 1972), parental activities (Wolf, 1964; Marjoribanks, 1972), parental resignation (Hess, 1969; Westinghouse, 1969), parental futility (Hess, 1969; Westinghouse, 1969), parental conservatism (Hess, 1969; Westinghouse, 1969), parental acceptance of the child (Bayley & Schaefer, 1960), parental restrictiveness (Becker, 1964; Baumrind, 1972), parental permissiveness (Becker, 1964; Baumrind, 1972), and parent authority attitude (Becker, 1964; Baumrind, 1972).

In addition to all of the variables mentioned above, ten other variables are considered in this study. They are quantity of TV viewing, parental restriction of TV, parental nonconformity, birth order of the child, participation in preschool programs, child's intelligence, child's age, child's sex, child's race, and the family's SES (income level).

This study focused on three questions: What is the role of each home and demographic variable taken one at a time in conjunction with self-concept and attitude toward school? What patterns of relationships exist between all of the home variables taken simultaneously with self-concept and attitude toward school? Is there any consistency in these patterns or roles over the six elementary school years?

Method

This study was designed to describe patterns of affective growth among elementary school children over a three year period. Two groups of children were used in this study: A first grade cohort and a fourth grade cohort which were tested initially and for two subsequent years. By linking the three year segments of growth from the first and fourth grade cohorts, a picture spanning the six elementary school years is developed for attitude toward school and self-concept. Parent attitude data collected during the first year provides the main independent variables of the study.

Subjects

The subjects were enrolled in five elementary schools in or near the inner city of Indianapolis, Indiana. The schools served primarily working class and blue collar neighborhoods, and included a large percentage of blacks. Of the students tested, only those students who remained enrolled in one of the five schools for all three years and whose parents completed a Parent Questionnaire, taken home by the student, or a subsequent interview, were retained in the study.

Instruments

Attitude Toward School. Attitude toward school is a scale developed by Meier and McDaniel (1974). The instrument contains 45 items designed to measure attitudes toward school in general, attitudes toward school work, and attitudes toward teachers. For example: "I am happy when the school day begins." "I learn nothing important in school." "Teachers are fair." Children in grade 4 through 6 respond on a five point scale ranging from strongly agree to strongly disagree. Children in the lower primary grades respond by indicating "yes" or "no" on an answer sheet.

For grade 1, a modified form of a scale developed by Strickland (1970) was used. The modified scale contains 30 items corresponding to the aspects of school attitude described above. "It is time for school to begin. Show what your face is like." Students respond by marking one of three faces (ranging from smiling to frowning) on an answer sheet.

The attitude toward school score used in this study, for all grades, is the total score of the relevant instrument.

Piers-Harris Children's Self-Concept Scale. This scale (Piers, 1969) designed to measure children's self-concept consists of 80 items to which the child responds by answering "yes" or "no"; for example, "I am often afraid." "I often volunteer in school." "I am obedient at home." The scale samples self-concept in six broad areas: behavior, intellectual and school status, physical appearance and attributes, anxiety, popularity, and happiness and satisfaction.

This scale was used to assess the self-concept of children in grades 4 through 6.

McDaniel-Piers Young Children's Self-Concept Scale. This scale (McDaniel, et al., 1973) was developed as part of the present study to measure the self-concept of children in grades 1 through 3. It is a downward extension of the Piers-Harris Children's Self-Concept Scale. The revised scale consists of 40 items chosen from the parent instrument because of their relevance for younger children. Wording was simplified where necessary. Items were chosen to represent three components of self-concept: feelings, behavior and perceptions related to school adjustment.

Raven's Coloured Progressive Matrices (Psychological Corporation, 1963). This is a widely used non-verbal test of general ability suitable for children age 5-11. This test was administered to both cohorts during the initial year of the study.

Parent Questionniare. The parent questionnaire was developed by Cicirelli as part of the effort of the initial year (McDaniel, et al., 1973). The 127 item questionnaire is printed in multiple-choice format and can be completed as a self-administered form or used as an interview schedule. The questionnaire provides 17 sub-scores:

1. Parent's achievement aspiration for the child. Seven items measuring the extent of the parent's educational and occupational aspirations for the child. Typical item: "What grades do you expect your child to receive in school?"

2. Home learning environment. Eleven items measuring aspects of the child's home environment which provide intellectual stimulation to the child. "Does your child have books to read here at home? How many would you say?"
3. Parental concern and interest in child's education. Six items measuring the parent's concern and interest in the child's education. "How often do you and your husband (wife) talk with your child about his or her schoolwork?"
4. Parental demand for maturity or independence. Seven items measuring the parent's demand for independence or maturity. "At what age would you expect a child to know his way around so he can play where he wants without getting lost?"
5. Quantity of TV. Three items measuring the amount of the child's television viewing; "On a school day, how much time does your child spend watching TV at home?"
6. Quality of TV. Three items measuring the amount of parental control of television viewing. "Do you let your child watch TV programs with violence in them?"
7. Parental activities. Seven items measuring the extent of the parent's involvement in school and community activities outside the home. "Are you a member of the parent-teachers organization at your child's school? If so, how often do you attend meetings?"

8. Resignation. Six items measuring the parental attitude of resignation to the role of the poor in the educational and social system. "Most kids who can do the work are able to get to college if they really want to."
9. Futility. Five items measuring the parent's feelings of lack of effectiveness in their relationship to the schools. "I can do very little to improve the schools."
10. Conservatism. Five items measuring the support of a traditional approach to education. "Teachers who are very friendly are not able to control the children."
11. Parental acceptance of child. Nine items measuring the parental attitude of acceptance of the child. "Some parents say that they get very much satisfaction from raising a child, while other parents say that they get no satisfaction at all. How much satisfaction would you say that your child has given you?"
12. Parental permissiveness. Seven items measuring parental permissiveness in child rearing. "I let my child choose his own friends and playmates, whether I approve or not."
13. Parent restrictiveness. Nine items measuring the extent to which the parent controls the child through extensive rules and restrictions. "How far can your child go alone (other than to school)?"
14. Parent authority attitudes. Nine items which measure authoritarian attitudes. "A child should come immediately when called."

15. Parental nonconformity. Nine items measuring parent's expectations that child will maintain his individuality in the presence of group pressures. "A child should learn to accommodate to the group."
16. Birth order. One item measuring order of birth among other siblings.
17. Preschool. One item measuring whether child had been enrolled in a preschool experience such as nursery school, kindergarten or Head Start.

Data Analysis

The data analysis was designed to answer the three questions posed earlier.

1. Correlation coefficients were generated between all independent variables and the measures of attitude toward school and self-concept taken at each grade level.
2. Multiple linear regression analysis was performed to observe the patterns of the independent variables forming the best prediction of attitude toward school and self-concept at each grade level.
3. The results of these first two steps were examined by inspection to determine whether consistent trends could be observed.

For all of the analyses, the independent variables were the Raven's Coloured Progressive Matrices, selected demographic variables and the sub-scores from the parent questionnaire.

Results and Discussion

The means and standard deviations for attitude toward school and for self-concept for each grade level are presented in Table 1 and Table 2. The correlation coefficients between attitude toward school and intelligence, demographic and parent questionnaire variables for each grade are presented in Table 3. The correlation coefficients between self-concept and intelligence, demographic and questionnaire variables are presented in Table 4. The results of the step-wise regression analysis are presented as separate summary tables for attitude toward school for each grade level (Tables 5 through 10) and for self-concept at each grade level (Tables 11 through 16).

Insert Tables 1 through 16 about here

Examination of the means in Tables 1 and 2 reveals little shifts in mean scores of attitude toward school and self-concept associated with grade level. This is consistent with the findings of other investigators in this area. The test instruments are constant for a particular cohort with the exception of the attitude toward school measure administered in grade 1. The relatively high mean is a function of the instrument used to assess attitude at this grade level.

Evidence for stability of the dependent variables from grade level to grade level reveals insignificant correlations

between the first and second grade administrations of both attitude toward school and self-concept. From second to third grade, however, the attitude toward school scores correlation coefficient was .58 and the self-concept coefficient was .55. At the upper primary level, the correlation coefficients for attitude toward school were .37 for grades 3 to 4 and .38 for grades 5 to 6. For self-concept, the correlation coefficients were .49 for grades 4 to 5 and .52 for grades 5 to 6.

The data presented in Table 3 reveal the relationships between the independent variables taken one at a time and the measures of attitude toward school across grade levels. In interpreting the correlations involving the demographic variables it is necessary to know that sex was coded 1 for girls, 2 for boys; race was coded 1 for Blacks, 2 for White and 3 for others; and SES is a teacher's estimate with 1 for "lower," 2 for "middle" and 3 for "upper."

It seems reasonable in interpreting the data in Table 3 not to pay too much attention to isolated coefficients which achieve statistical significance. The children in grade 1 through 3 are exactly the same children, the first year's data for the independent variables remains constant, and the only difference from year to year is a new measure of attitude. The same statements apply to children in grades 4 through 6. It should be noted however, that as attention shifts from grade 3 to grade 4, a completely separate sample of children is being considered.

With these factors in mind, it seems reasonable to insist on at least two significant correlations as an indicator that an independent variable is playing a consistent role in influencing the dependent variable. Considering that the correlation between grade one and grade two attitude measures was not significantly high, one may even want to consider that two significant correlations for an independent variable at grade 2 and 3 might establish a trend that could be extrapolated back to first grade and confirmed if a better measure of attitude had been available at that level.

With this background, the data in Table 3 seem to suggest a definite relationship between general ability as indicated by the Raven's Matrices and attitude toward school for the lower elementary grades. Similarly, the home learning environment apparently plays a highly significant role in attitudes toward school. It is not clear whether these variables "fade out" as the child progresses through school. The correlations for subsequent grades suggest that this might be the case. Equally probable at this time is the alternative hypothesis that variations in sample of children from the first grade cohort to the fourth grade cohort may account for the absence of significant correlations for general ability and home learning environment at the upper elementary grades.

For the fourth grade cohort, the amount of TV viewing is negatively associated with attitude toward school. Additionally, parents of sixth grade children with poor attitudes toward school

are less concerned with the type and quality of television programs watched by their children.

The most consistent relationships revealed by Table 3 are those between the child's school attitude and parental orientations to education favoring a liberal rather than a conservative view and the degree of parental acceptance of the child. The correlations for the conservatism scale were consistent across samples of children, suggesting that this may be a very strong variable, and the parental acceptance of child scale revealed consistent correlations at all three grade levels for the fourth grade cohort.

Turning to the relationships among the independent variables and the measures of self-concept, Table 4 reveals five variables that may be mentioned within the decision rules established earlier. General ability and parent's achievement aspirations for the child both are significantly related to children's self-concepts at the upper elementary level. At the lower elementary level, parent's concern for education and an absence of feelings of futility are related to positive self-concepts of children.

As in attitude toward school, conservatism appears as a strong variable for self-concept for both the first grade and the fourth grade cohorts. Parents who favor existing school content, emphasis on the 3 Rs and not too much friendliness between students and teachers have children with lower self-concepts than do parents with more liberal views of education.

Examination of the summary tables of the step-wise regression analysis reveals no consistent patterns of parental attitudes associated with attitudes toward school or self-concept. Some trends are indicated by the relatively frequent appearance of parental acceptance, resignation and conservatism in association with attitude toward school and conservatism, futility, parental nonconformity and Ravens in association with self-concept. In any event, the small number of cases and large number of variables involved make the regression analysis mostly exploratory. This exploration does not reveal a cluster of parental attitudes which bears a stable relationship to school attitudes and self-concepts across the elementary school years.

In summary, this study has examined a large number of parental attitude variables that might have some relationship to school attitude and self-concept. While significant correlations were found among some of the independent and dependent variables at each grade level, no highly consistent patterns were revealed. These findings suggest caution in accepting conclusions based on a single sample studied at one point in time. At the same time, this study points to the parental attitudes of conservatism, futility, resignation as well as the non-verbal ability of the child as being variables which merit continued study in efforts to determine some of the antecedants of attitude toward school and self concept.

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Table 1

Attitude Toward School Mean And

Standard Deviation For Grades 1 to 6

Grade	n	Mean	Standard Deviation
1	28	54.64	7.49
2	28	29.39	9.77
3	28	33.61	8.25
4	40	155.50	29.62
5	40	142.28	31.66
6	40	149.93	25.78

Table 2

Self-Concept Mean And Standard

Deviation For Grades 1 to 6

Grade	n	Mean	Standard Deviation
1	31	16.97	11.08
2	31	26.35	6.69
3	31	27.39	7.16
4	43	51.91	10.71
5	43	51.21	12.18
6	43	51.53	14.35

Table 3

Correltations of Attitude Toward School With
Intelligence, Demographic, and Parent Questionnaire Variables

Variable	Grade 1 n=28	2 n=28	3 n=28	4 n=40	5 n=40	6 n=40
Raven's	.03	.36*	.31*	.22	.04	.08
Age	-.16	-.12	-.21	-.02	.01	.26*
Sex	-.27	.13	-.04	-.30*	.00	.01
Race	-.21	.40*	.29	-.34*	.02	-.38**
SES	.40*	-.25	-.06	.20	-.08	.03
Aspirations	.08	-.17	-.04	.16	.22	.28*
Learning Environment	-.16	.41**	.56**	.22	.09	.19
Concern for Education	-.06	.28	.15	.17	.09	.29*
Maturity Demand	-.01	.27	.25	.14	.01	.15
TV Quantity	.32*	.18	.25	-.04	-.31*	-.30*
TV Quality	-.01	-.26	.12	-.18	-.08	-.29*
Activities of Parents	.12	.04	-.01	.13	.11	.24
Resignation	-.21	-.16	.01	-.11	.03	-.09
Futility	.09	-.05	.21	.29*	.06	-.10
Conservatism	.07	.11	.44**	.39**	.29*	-.09
Parental Acceptance of Child	-.27	-.15	..16	.38**	.41**	.30*
Permissiveness	.09	.13	-.06	.08	-.08	-.01
Restriction	-.47**	-.02	-.03	.10	-.10	-.16
Nonconformity	.27	.03	.12	.22	.05	.02
Authority	.14	-.24	-.08	.00	.27*	-.07
Birth Order	.13	.42**	.21	-.07	-.11	-.29*
Preschool	.01	.24	.16	.17	.12	.18

*Significant beyond .05, one-tail test.

**Significant beyond .01, one-tail test.

Table 4

Correlations of Self-Concept with
Intelligence, Demographic, and Parent Questionnaire Variables

Variable	Grade 1 n=31	2 n=31	3 n=31	4 n=43	5 n=43	6 n=43
Raven's	.35*	.04	.24	.09	.39**	.42**
Age	-.16	.24	-.09	.13	.11	-.09
Sex	-.23	-.12	-.01	.16	.19	.03
Race	.58**	.17	.15	-.05	.04	-.13
SES	.03	.11	.21	.12	.13	.16
Aspirations	.13	.02	.13	.40**	.38**	.21
Learning Environment	.52**	.08	.21	-.05	.24	.20
Concern for Education	.44**	.30*	.08	.22	.24	.20
Maturity Demand	-.08	-.10	.06	.07	.16	.20
TV Quantity	.09	.13	.17	-.37**	-.14	.09
TV Quality	-.61**	-.10	-.22	-.05	-.01	-.05
Activities of Parents	.05	.26	.12	.29*	.20	.21
Resignation	-.10	-.04	.07	.05	.17	-.02
Futility	-.06	.41**	.48**	.02	.18	.25
Conservatism	.11	.46**	.58**	.40**	-.08	.18
Parental Acceptance of Child	.11	.11	.02	.15	.40**	.05
Permissiveness	-.07	-.10	-.13	-.15	.05	.11
Restriction	.27	-.23	-.04	.10	-.23	-.15
Nonconformity	-.03	.08	.03	-.19	-.09	-.19
Authority	-.17	-.16	-.08	.13	-.03	-.10
Birth Order	.27	.07	-.02	.04	.17	.38**
Preschool	-.04	-.19	.22	.02	.20	.35**

*Significant beyond .05, one-tail test.

**Significant beyond .01, one-tail test.

Table 5

Attitude Toward School Grade 1

Summary Table

STEP	VARIABLE ENTERED	VARIABLE REMOVED	MULTIPLE R	R SQUARE	R SQUARE CHANGE	OVERALL F	SIGNIFICANCE
1	RESTRC		.46645	.21757	.21757	7.22986	.012
2	NONCON		.52559	.27625	.05868	4.77115	.018
3	ASPIR		.58264	.33947	.06322	4.11147	.017
4	ACCEPT		.63753	.40644	.06697	3.93729	.014
5	CONSER		.65412	.42787	.02143	3.29054	.023
6	FUTILE		.68950	.47540	.04754	3.17181	.022
7	CRNED		.71617	.51291	.03750	3.00854	.025
8	PERMIS		.74246	.55125	.03834	2.91743	.026
9	RESIG		.75202	.56553	.01428	2.60331	.040
10	BIRORD		.76386	.58348	.01795	2.38140	.055
11	ACTPAR		.77481	.60033	.01686	2.18486	.076
12	PRESCH		.79206	.62736	.02702	2.10443	.087
13	AUTHOR		.81000	.65610	.02874	2.05461	.097
14	RAVENS		.82667	.68339	.02729	2.00428	.110
15	TVQUAN		.86238	.74369	.06030	2.32126	.074
16	LRNENV		.87147	.75946	.01576	2.17059	.098
17	MATDEM		.87179	.76002	.00057	1.86296	.159

Table 6

Attitude Toward School Grade 2

Summary Table

STEP	VARIABLE ENTERED	VARIABLE REMOVED	MULTIPLE R	R SQUARE	R SQUARE CHANGE	OVERALL F	SIGNIFICANCE
1	BIRORD		.41505	.17226	.17226	5.41098	.028
2	TVQUAL		.51227	.26242	.09016	4.44738	.022
3	LRNENV		.58408	.34115	.07873	4.14245	.017
4	ACCEPT		.62072	.38529	.04413	3.60399	.020
5	MATDEM		.66305	.43963	.05434	3.45196	.019
6	RESIG		.69872	.48821	.04858	3.33871	.018
7	CONSER		.72565	.52657	.03837	3.17790	.020
8	PERMIS		.75662	.57247	.04590	3.18017	.018
9	ACTPAR		.78833	.62146	.04899	3.28350	.015
10	AUTHOR		.81020	.65642	.03495	3.24786	.016
11	PRESCH		.81683	.66721	.01080	2.91625	.026
12	FUTILE		.83051	.68974	.02253	2.77889	.032
13	ASPIR		.84401	.71236	.02261	2.66702	.040
14	CRNED		.85766	.73558	.02323	2.58318	.048
15	NONCON		.87111	.75884	.02325	2.51725	.057
16	RAVENS		.87413	.76410	.00527	2.22691	.091
17	TVQUAN		.88126	.77662	.01251	2.04505	.145

Table 7

Attitude Toward School Grade 3

Summary Table

STEP	VARIABLE ENTERED	VARIABLE REMOVED	MULTIPLE R	R SQUARE	R SQUARE CHANGE	OVERALL F	SIGNIFICANCE
1	LRNENV		.55995	.31355	.31355	11.87593	.002
2	CONSPR		.69478	.48272	.16918	11.66502	.000
3	CRNED		.73209	.53596	.05324	9.23992	.000
4	FUTILE		.77150	.59521	.05925	8.45506	.000
5	AUTHOR		.78539	.61684	.02162	7.08341	.000
6	PRESCH		.79618	.63391	.01707	6.06042	.001
7	RESIG		.80298	.64477	.01086	5.18593	.002
8	TVQUAN		.80709	.65140	.00663	4.43791	.004
9	ACTPAR		.81052	.65695	.00555	3.83000	.007
10	BIRORD		.81594	.66576	.00881	3.38612	.013
11	RAVENS		.82165	.67511	.00935	3.02252	.022
12	NONCON		.82668	.68340	.00829	2.69820	.036
13	RESTRC		.83203	.69228	.00888	2.42277	.056
14		FUTILE	.83201	.69225	-.00003	2.81171	.031
15	TVQUAL		.83829	.70273	.01048	2.54574	.047
16	MATDEM		.84134	.70785	.00512	2.24981	.077
17		AUTHOR	.84133	.70784	-.00001	2.60917	.043
18	ASPIR		.84752	.71829	.01045	2.36765	.065
19	PERMIS		.85056	.72346	.00517	2.09287	.102
20	AUTHOR		.85362	.72866	.00520	1.84624	.153
21	ACCEPT		.85392	.72918	.00052	1.58385	.232

Table 8

Attitude Toward School Grade 4

Summary Table

STEP	VARIABLE ENTERED	VARIABLE REMOVED	MULTIPLE R	R SQUARE	R SQUARE CHANGE	OVERALL F	SIGNIFICANCE
1	CONSER		.38702	.14978	.14978	6.69451	.014
2	ACCEPT		.50589	.25592	.10614	6.36304	.004
3	RESIG		.58039	.33685	.08093	6.09548	.002
4	RAVENS		.60196	.36235	.02550	4.97237	.003
5	TVQUAL		.61642	.37998	.01762	4.16731	.005
6	PERMIS		.62970	.39653	.01655	3.61389	.007
7	BIRORD		.63696	.40572	.00920	3.12100	.013
8	ASPIR		.64357	.41418	.00846	2.73970	.021
9	TVQUAN		.64720	.41886	.00468	2.40255	.035
10	FUTILE		.65263	.42593	.00707	2.15163	.053
11	CRNED		.66080	.43665	.01073	1.97300	.072
12		RAVENS	.66077	.43662	-.00003	2.24751	.043
13	AUTHOR		.66820	.44649	.00987	2.05328	.061
14	LRNENV		.67263	.45243	.00594	1.85903	.088
15	PRESCH		.67594	.45689	.00447	1.68253	.125
16	MATDEM		.68341	.46705	.01015	1.56490	.159
17	NONCON		.68438	.46838	.00133	1.40967	.220
18	ACTPAR		.68521	.46951	.00113	1.27225	.292

Table 9

Attitude Toward School Grade 5

Summary Table

STEP	VARIABLE ENTERED	VARIABLE REMOVED	MULTIPLE R	R SQUARE	R SQUARE CHANGE	OVERALL F	SIGNIFICANCE
1	ACCEPT		.41098	.16891	.16891	7.72282	.008
2	AUTHOR		.48421	.23446	.06555	5.66585	.007
3	RESIG		.52103	.27148	.03702	4.47169	.009
4	CONSFD		.56461	.31879	.04731	4.09470	.008
5	BIRORD		.59095	.34852	.02973	3.63771	.010
6	MATDEM		.60731	.36882	.02031	3.21389	.013
7	RESTRC		.62258	.38761	.01879	2.89346	.018
8	TVQUAN		.64842	.42045	.03285	2.81128	.018
9	RAVENS		.65823	.43327	.01281	2.54832	.026
10	FUTILE		.66552	.44292	.00965	2.30568	.039
11	CRNED		.67107	.45033	.00742	2.08545	.057
12	NONCON		.67501	.45563	.00530	1.88325	.084
13	TVQUAL		.67761	.45915	.00352	1.69792	.121
14	ASPIR		.68087	.46359	.00444	1.54330	.167
15	ACTPAR		.68431	.46828	.00469	1.40913	.220
16	PERMIS		.68453	.46859	.00030	1.26755	.295

Table 10

Attitude Toward School Grade 6

Summary Table

STEP	VARIABLE ENTERED	VARIABLE REMOVED	MULTIPLE R	R SQUARE	R SQUARE CHANGE	OVERALL F	SIGNIFICANCE
1	TVQUAN		.29651	.08792	.08792	3.96298	.063
2	BIRORD		.40205	.16164	.07372	3.96698	.038
3	TVQUAL		.48317	.23345	.07181	3.95459	.021
4	RESTRC		.57838	.33452	.10107	4.39850	.006
5	ACTPAR		.63072	.39780	.06328	4.49200	.003
6	AUTHOR		.68342	.46706	.06925	4.82007	.001
7	PRESCH		.69973	.48963	.02257	4.38564	.002
8	FUTILE		.71847	.51620	.02657	4.13449	.002
9	LRNENV		.73882	.54585	.02966	4.00646	.002
10	PERMIS		.75745	.57373	.02787	3.90317	.002
11	ACCEPT		.76332	.58266	.00893	3.55377	.004
12	NONCON		.77095	.59437	.01171	3.59689	.005
13	RESIG		.77763	.60470	.01034	3.65949	.007
14		PRESCH	.77758	.60464	-.00007	3.44095	.004
15	ASPIR		.78072	.60952	.00489	3.12194	.007
16	CRNED		.78169	.61103	.00151	2.80520	.014
17	MATDEM		.78217	.61179	.00075	2.52146	.021
18	PRESCH		.78256	.61239	.00061	2.27115	.035

Table 11

Self-Concept Grade 1

Summary Table

STEP	VARIABLE ENTERED	VARIABLE REMOVED	MULTIPLE R	R SQUARE	R SQUARE CHANGE	OVERALL F	SIGNIFICANC
1	TVQUAL		.60641	.36774	.36774	16.86697	.000
2	LRNENV		.71903	.51830	.15056	15.06347	.000
3	CONSER		.73551	.54097	.02268	10.60672	.000
4	FUTILE		.76900	.59136	.05039	9.40658	.000
5	AUTHOR		.78144	.61096	.01960	7.85226	.000
6	RAVENS		.78946	.62356	.01259	6.62574	.000
7	PRESCH		.79673	.63478	.01122	5.71081	.001
8	ACCEPT		.80487	.64782	.01304	5.05859	.001
9	ASPIR		.80966	.65457	.00675	4.42154	.002
10	TVQUAN		.81171	.65887	.00430	3.86284	.005
11	RESTRC		.81548	.66533	.00646	3.43388	.009
12	CRNED		.81907	.67087	.00554	3.05744	.016
13	NONCON		.82273	.67688	.00602	2.73944	.027
14	RESIS		.82876	.68684	.00995	2.50657	.040
15	MATDEM		.83046	.68966	.00282	2.22226	.067
16		FUTILE	.83045	.68966	-.00000	2.53968	.058
17	BIRORD		.83145	.69164	.00199	2.24301	.084
18	PERMIS		.83163	.69211	.00046	1.96689	.105
19	ACTPAR		.83267	.69234	.00024	1.72087	.103

Table 12

Self-Concept Grade 2

Summary Table

STEP	VARIABLE ENTERED	VARIABLE REMOVED	MULTIPLE R	R SQUARE	R SQUARE CHANGE	OVERALL F	SIGNIFICANC
1	CONSER		.46259	.21399	.21399	7.89497	.009
2	CRNED		.53731	.28870	.07472	5.68239	.008
3	PRESCH		.58916	.34711	.05841	4.78486	.008
4	FUTILE		.66469	.44181	.09470	5.14479	.003
5	MATDEM		.68692	.47186	.03005	4.46724	.005
6	ACCEPT		.69478	.48273	.01086	3.73284	.009
7	ASPIR		.70580	.49815	.01543	3.26153	.015
8	BIRORD		.71568	.51220	.01405	2.88759	.023
9	LRNENV		.72107	.51995	.00774	2.52724	.038
10	AUTHOR		.72519	.52590	.00595	2.21851	.062
11	ACTPAR		.72718	.52879	.00289	1.93836	.099
12	TVQUAN		.72954	.53222	.00343	1.70666	.148
13	TVQUAL		.73190	.53568	.00346	1.50867	.211
14	RAVENS		.73351	.53804	.00236	1.33105	.284
15	RESIS		.73519	.54050	.00246	1.17627	.379
16		CONSER	.73518	.54049	-.00001	1.34425	.283

Table 13

Self-Concept Grade 3

Summary Table

STEP	VARIABLE ENTERED	VARIABLE REMOVED	MULTIPLE R	R SQUARE	R SQUARE CHANGE	OVERALL F	SIGNIFICANCE
1	CONSER		.58257	.33939	.33939	14.89869	.001
2	TVQUAL		.65114	.42369	.08460	10.30494	.000
3	LRNENV		.66156	.43767	.01368	7.00478	.001
4	ACCEPT		.68346	.46712	.02946	5.09795	.002
5	FUTILE		.69827	.48759	.02046	4.75777	.003
6	PERMIS		.70738	.50039	.01280	4.00628	.006
7	RESTRC		.72329	.52314	.02275	3.60464	.009
8	ASPIR		.73335	.53780	.01466	3.19979	.014
9	TVQUAN		.73687	.54298	.00518	2.77218	.026
10	RAVENS		.73859	.54552	.00254	2.40065	.046
11	MATDEM		.74016	.54784	.00232	2.09277	.076
12	NONCON		.74227	.55097	.00313	1.84055	.117
13	AUTHOR		.74363	.55299	.00202	1.61774	.174
14	ACTPAR		.74420	.55384	.00084	1.41866	.249
15	BIRORD		.74450	.55428	.00044	1.24354	.339

Table 14

Self-Concept Grade 4

Summary Table

STEP	VARIABLE ENTERED	VARIABLE REMOVED	MULTIPLE R	R SQUARE	R SQUARE CHANGE	OVERALL F	SIGNIFICANCE
1	ASPIR		.40366	.16294	.16294	7.98103	.007
2	CONSER		.53405	.28521	.12227	7.98030	.001
3	NONCON		.60796	.36961	.08440	7.62225	.000
4	FUTILE		.64445	.41531	.04570	6.74802	.000
5	TVQUAN		.68205	.46519	.04988	6.43666	.000
6	RAVENS		.70140	.49197	.02678	5.81022	.000
7	ACCEPT		.71393	.50969	.01772	5.19764	.000
8	LRNENV		.73525	.54059	.03090	5.00108	.000
9	MATDEM		.74445	.55420	.01360	4.55822	.001
10	ACTPAR		.75105	.56407	.00987	4.14064	.001
11	AUTHOR		.75769	.57409	.01002	3.79862	.002
12	PERMIS		.76378	.58336	.00927	3.50038	.003
13	BIRORD		.76836	.59038	.00702	3.21523	.004
14	CRNED		.77186	.59545	.00507	2.94380	.007
15	TVQUAL		.77449	.59983	.00438	2.69812	.012
16	RESIG		.77630	.60264	.00281	2.46449	.020
17	PRFSCH		.77683	.60347	.00083	2.23803	.033

Table 15

Self-Concept Grade 5

Summary Table

STEP	VARIABLE ENTERED	VARIABLE REMOVED	MULTIPLE R	R SQUARE	R SQUARE CHANGE	OVERALL F	SIGNIFICANCE
1	ACCEPT		.30949	.15959	.15959	7.78575	.008
2	RAVENS		.58024	.33668	.17709	0.15121	.000
3	ASPIR		.62985	.39671	.06003	8.54850	.000
4	NONCON		.68175	.46478	.06807	8.24970	.000
5	RESTRC		.70479	.49673	.03195	7.30393	.000
6	MATDEM		.72883	.53119	.03445	6.79831	.000
7	CONSER		.74055	.54841	.01722	6.07201	.000
8	TVQUAN		.75140	.56461	.01620	5.51127	.000
9	BIRORD		.75986	.57739	.01279	5.00964	.000
10	RESIG		.76953	.59217	.01478	4.64642	.000
11	AUTHOR		.77916	.60710	.01493	4.35451	.001
12	LRNENV		.78940	.62315	.01605	4.13392	.001
13	TVQUAL		.79509	.63216	.00902	3.83381	.001
14	FUTILE		.79679	.63488	.00271	3.47762	.002
15	PERMIS		.79784	.63654	.00166	3.15244	.005
16	PRESCH		.79795	.63672	.00018	2.84818	.009

Table 16

Self-Concept Grade 6

Summary Table

STEP	VARIABLE ENTERED	VARIABLE REMOVED	MULTIPLE R	R SQUARE	R SQUARE CHANGE	OVERALL F	SIGNIFICANCE
1	RAVENS		.41668	.17362	.17362	8.81412	.005
2	BIRORD		.58364	.34064	.16701	10.33228	.000
3	PRESCH		.62056	.38510	.04446	8.14166	.000
4	NONCON		.64249	.41280	.02770	6.87640	.000
5	ASPIR		.66419	.44115	.02836	5.94158	.000
6	CONSER		.67952	.46175	.02059	5.14717	.001
7	AUTHOR		.70402	.49564	.03390	4.91361	.001
8	TVQUAL		.72045	.51904	.02340	4.58657	.001
9	RESTRC		.73330	.53773	.01868	4.26519	.001
10	ACTPAR		.74262	.55148	.01375	3.93464	.001
11	TVQUAN		.74410	.55369	.00220	3.49619	.003
12	ACCEPT		.74728	.55843	.00474	3.16160	.005
13	PERMIS		.74902	.56103	.00260	2.85109	.009
14	MATDEM		.75027	.56290	.00187	2.57563	.016
15	CRNED		.75115	.56423	.00133	2.33061	.027
16	LRNENV		.75194	.56542	.00119	2.11421	.043
17	FUTILE		.75322	.56734	.00192	1.92835	.066
18	RESIG		.75366	.56801	.00067	1.75315	.094